Prevention and Chronic Disease An Overview



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Prevention and Chronic Disease Overview

Scope Strategies

Proposals



Scope

Cost
Coverage
Containment



Scope: Problem Statement

We spend nearly twice as much for health care as any other nation, but we are among the sickest people in the industrialized world.



Scope: U.S. Healthcare Costs

- 1980 \$ 253B or \$ 1,102 per person
- 2001 \$1.46T or \$ 5,148 per person
- 2002 \$1.60T or \$ 5,317 per person
- 2003 \$1.73T or \$ 5,952 per person
- 2004 \$1.85T or \$ 6,322 per person
- 2005 \$1.98T or \$ 6,697 per person
- 2015 \$3.87T or \$12,062 per person

Centers for Medicare and Medicaid Services

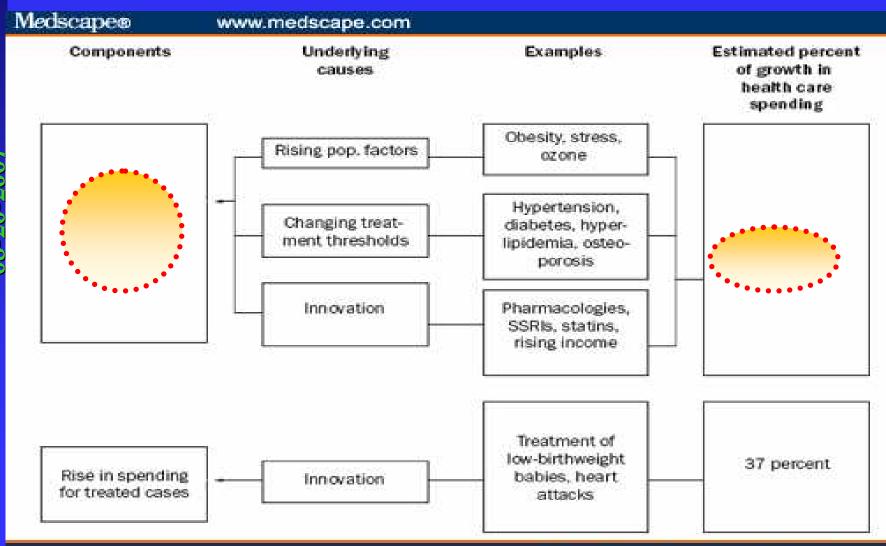
Scope: U.S. Healthcare Costs







Scope: Cause of Increased Costs



Source: Health Aff @ 2005 Project HOPE

Aging Population –

1900 – 3 million Americans 65 years or older 1 in 25 Americans

2005 – 35 million Americans 65 years or older 1 in 8 Americans

2030 – 71 million (proj.) Americans 65 yrs or older; 10 million 85 yrs or older



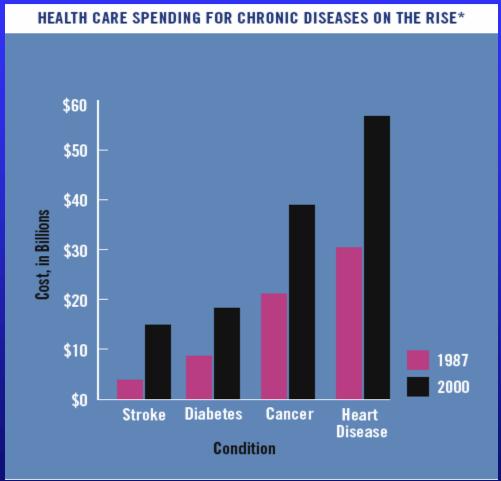
Scope: Cost of Chronic Disease

75% of national health care costs are expended to treat chronic diseases.

KS – 2004 chronic disease cost estimate - \$10.7 billion.



Scope: Cost of Chronic Disease



*Data Source: 1987 National Medical Expenditure Survey (NMES) and 2000 Medical Expenditure Panel Survey, Household Component (MEPS-HC). In: Thorpe KE, Florence CS, Joski P. Which medical conditions account for the rise in health care spending? Health Aff. 2004 August 25; [epub ahead of print].



Scope: Cost Allocation

30% of people account for 90% of health care costs.

1% of people account for 30% of health care costs.



Scope: Problem Statement We are not focused on health outcomes.

- U.S. Health Status 49th out of 50 industrialized nations (W.H.O.)
- Age adjusted mortality rate for women 31st below Slovenia and Costa Rica (World Bank)
- Infant mortality 26th twice the rate of Singapore; tied with Croatia and Cuba (World Bank)



WHO - U.S. Health Outcomes (2001)

	Life expectancy at birth	Life expectancy at age 60	Healthy years remaining at age 60	Average years spent in poor health	% of total life expectancy spent in poor health
Australia	79.7	83.3	17.6	8.4	10.5%
Austria	78.6	82.4	17.1	7.9	10.1%
Belgium	78.0	81.8	16.3	8.3	10.6%
Canada	79.7	82.5	16.6	9.4	11.8%
France	79.2	83.1	17.6	8.1	10.2%
Germany	78.5	81.6	16.4	7.9	10.0%
Italy	79.8	82.3	16.9	8.2	10.2%
Japan	81.5	84.2	18.9	7.7	9.4%
N <i>e</i> therlands	78.3	81.4	16.2	8.4	10.7%
Spain	79.3	82.4	16.7	8.1	10.2%
Sweden	79.9	82.7	17.5	8.2	10.2%
Switzerland	80.2	82.3	18.8	7.3	9.1%
U.K.	78.1	81.0	16.0	7.8	10,0%
USA	77.1	81.6		9.4	

Child / Mother Health Outcomes



	Infant mortality rate (<1 yr)	Child mortality rate (<5 yr)	Maternal deaths/100,000 births	% of newborns with low birthweight
Australia	5.3	6.2	8	7%
Austria	4.8	5.7	4	7%
Belgium	4.5	6	10	8%
Canada	5.2	6	6	6%
France	4.5	5.5	17	7%
Germany	4.3	5.3	8	7%
Italy	4.7	5.6	5	6%
Japan	3.1	4.5	10	8%
Netherlands	5.4	6.3	16	na
Spain	3.5	5.5	4	6%
Sweden	3.7	3.9	2	4%
Switzerland	5	5.8	7	6%
U.K.	5.5	6.9	13	8%
USA				8%

OCED - (2001)

Kansas Health Outcomes

•	Expenditures per capita	22 nd
•	Infant mortality	27 th
•	Age-adjusted death rates	21 st
•	YPLL from cancer	18 th
•	YPLL from heart disease	19 th
•	YPLL from all causes	22 nd
•	Physicians per capita	37 th
•	Hospital beds per capita	8 th

• State health ranking

Our Vision – Healthier Kansans living in safe and sustainable environments.

17th

Scope

Cost
Coverage
Containment



Scope – U.S. Coverage

• 1980 – \$253B or \$1,102 per person 25 Million uninsured

2005 - \$1.98T or \$6,697 per person
 47 Million uninsured

• DeNavas-Walt, C.B. Proctor, and C.H. Lee. <u>Income, Poverty, and Health Insurance Coverage in the United States</u>; 2005. *U.S. Census Bureau*., August 2006.

Scope: State Coverage

300,000 Kansans uninsured

95% live in a home where someone works

- 40,000 Kansas Children HealthWave
- 30,000 low-wage working parents (37% FPL \$7,000 family of four to

100% FPL - \$17,000 family of four)

Strategies

Cost
Coverage
Containment



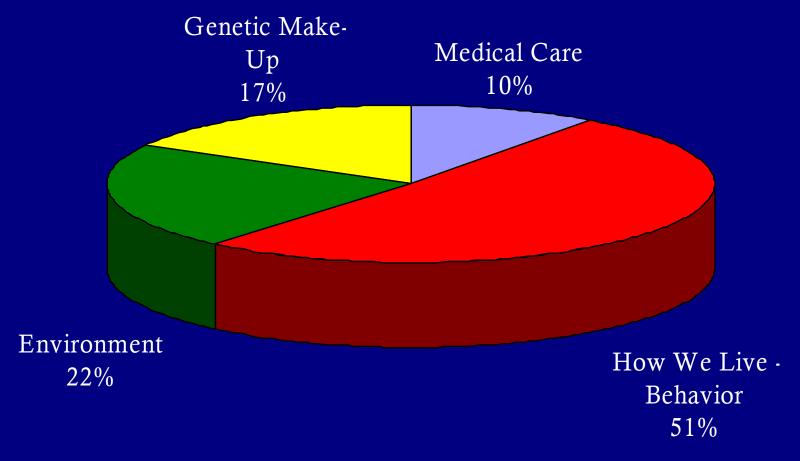
Strategy - Prevention

"The function of protecting and developing health must rank even above that of restoring it when it is impaired."

- Hippocrates



Health Factors



Source: USDHEW, PHS, CDC. "Ten Leading Causes of Death in US 1975." Atlanta, GA, Bureau of State Services, Health Analysis & Planning for Preventive Services, p 35, 1978

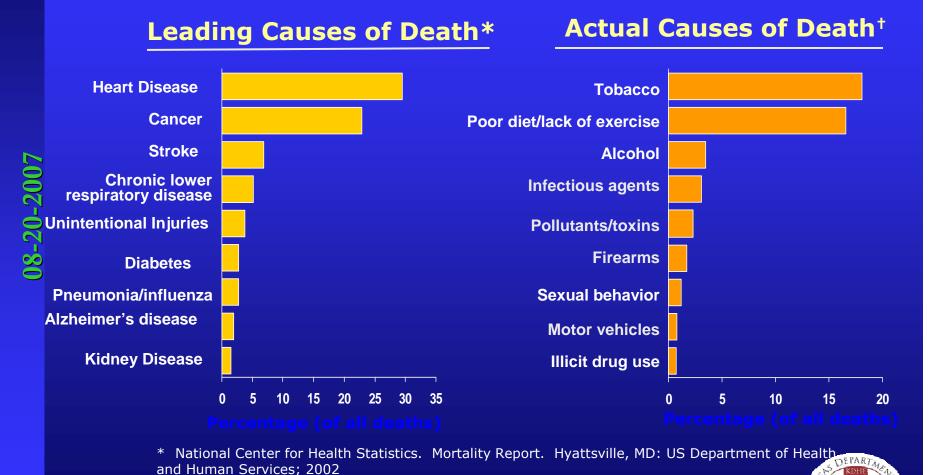
20th Century – U.S. life expectancy increased by 35 years

o 5 years attributed to advances in clinical medicine

o 30 years attributed to public health (i.e., improvements in sanitation, health education, the development of effective vaccines)



Causes of Death United States, 2000



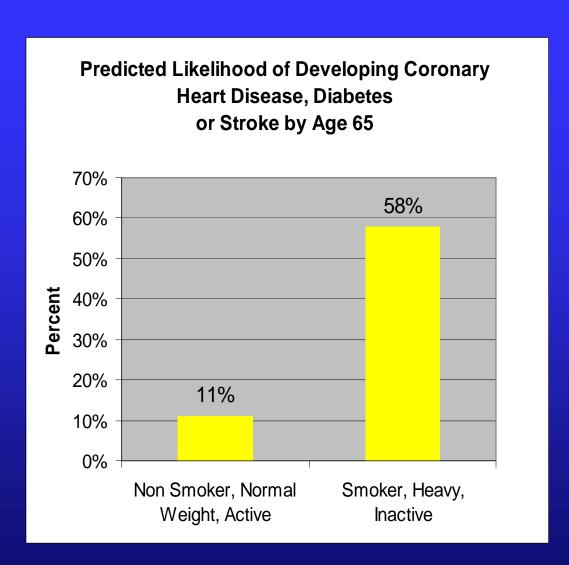
Adapted from McGinnis Foege, updated by Mokdad et. al.

Strategy

Many chronic diseases and illnesses can be attributed to three modifiable behaviors:

Tobacco use
Lack of physical activity
Poor nutrition





Source: Jones et al., Arch Intern Medicine, 1998; Vol 2436



Strategy – Prevention

"An ounce of prevention is worth a pound of cure"

Henry De Bracton, 1240



Strategy

A third of all U.S. deaths are attributable to three modifiable health-damaging behaviors:

- tobacco use 440,000/yr
- —lack of physical activity 365,000/yr
- poor nutrition

Strategy - Healthy Kansas

Prevention focus -

Tobacco use

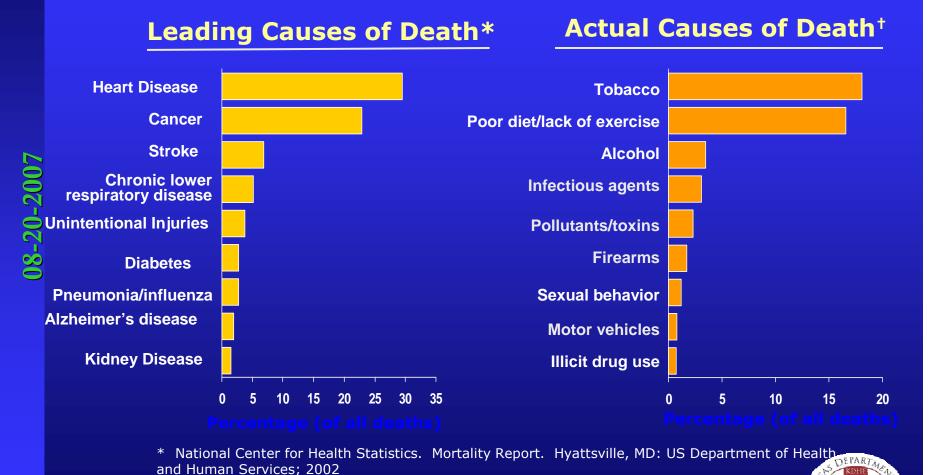
\$927M/yr

- Physical inactivity (obesity)
 - Poor nutrition (obesity) \$657M/yr

Smoking-caused health expenditures, productivity losses, tax burdens CDC, Data Highlights 2006

"State-Level Estimates of Annual Medical Expenditures Attributable to Obesity", by Eric A. Finkelstein and Ian C. Fiebelkorn, RTI International, and Guijing Wang, CDC, Journal of Obesity Research (January 2004).

Causes of Death United States, 2000



Adapted from McGinnis Foege, updated by Mokdad et. al.

Strategy

THE RELATIONSHIP BETWEEN RISK FACTORS AND CHRONIC DISEASES to reduce these chronic diseases: Work on these risk factors . . . Cardiovascular **Physical** Disease Inactivity Stroke Роог Nutrition Cancer Tobacco Diabetes Use



Strategies - Intervention Sites to Prevent or Treat Chronic Disease

- Medical Settings
- School
- Work Site
- Community





A roadmap for health promotion and wellness, incorporating community coalition building and private sector partnerships.



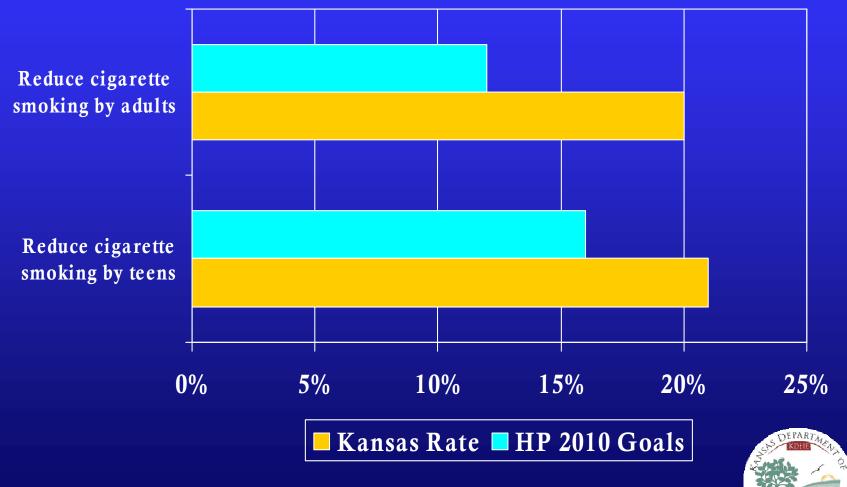
"Working together we can create a culture that actively promotes responsible behavior and the adoption of lifestyles conducive to good health.

This is "prevention" in the broadest sense and necessary if we are to remain a humane and caring society."

Larry D. Jecha, M.D., M.P.H.
Former Director/Health Officer
Wichita-Sedgwick County Department of Health
— 1997

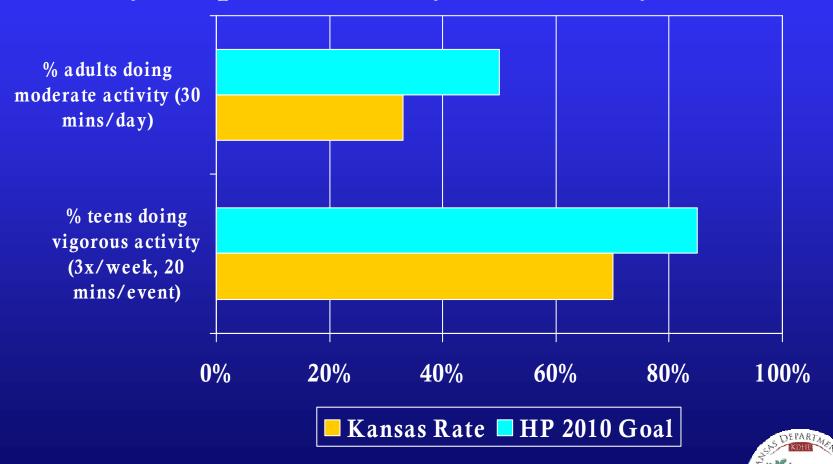
Healthy Kansas

Healthy People 2010—Tobacco Use

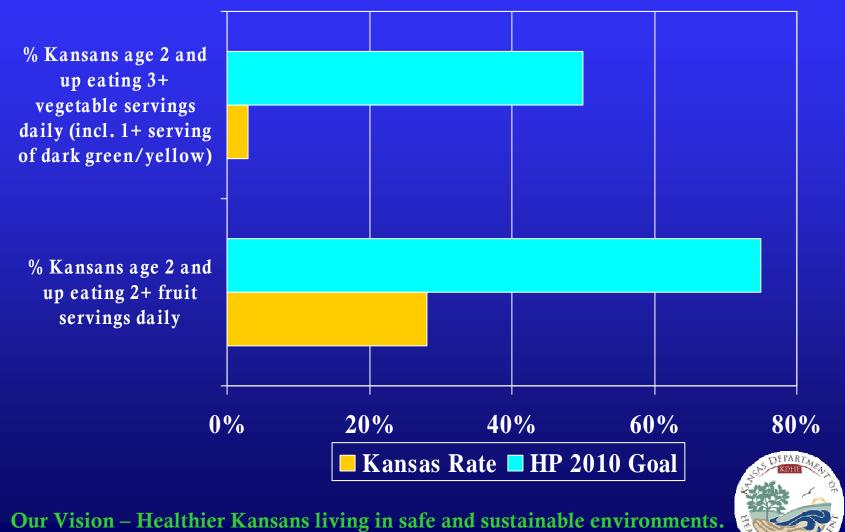


Healthy Kansas

Healthy People 2010—Physical Activity



Healthy Kansas Healthy People 2010—Nutrition



Healthy Kansas

Placed Based Strategy -

- Children in schools
- Adults in the workplace
- Kansas seniors in community



Healthy Kansas – Children in Schools

- Coordinated School Health Initiative Infrastructure – 52 Districts, 224 Schools, 80,736 Children, 39 Counties
 - Voluntary Body Mass Index (BMI)Testing
 - Child Health Advisory Committee
 - School Nutrition and Physical Activity
 Committees

Healthy Kansas – Adults in the Workplace

- Formalize workplace wellness program
- Technical Assistance (TA) to other state agencies – HRA program
- Pilot business workplace wellness programs with toolkits and website support

Healthy Kansas – Seniors in the Community



- With Dept. on Aging (KDOA), provide TA for local wellness programs for seniors
- KDOA STEPS Program (Seniors Together Enjoy Physical Success)
 - Expansion of Senior Farmer's Market
 - Encourage community gardens



08 - 20 - 2007

Healthy Kansas Seniors Together Enjoy Physical Success

"It's never too late to reap the benefits of a healthy lifestyle"

- Governor Eathlean Sebellus



Eanage Department on Aging 503 S. Kansas Avenue Tepako, 13 66603

www.oginakansas.org

A Konson Department on Aging program funded by The Sunflower Foundation: Health Care for Kansons

Modeled after "EnhanceFitness" a program of Senior Services of Seattle/King County

Serviors Together Enjoy Physical Success

As part of the Governor's Healthy Kansas Initiative, the Kansai Department on Aging has implemented an exercise program targeted for seniors over the age of 60, Seniors Tagether Enjoy Physical Success. OW STEPS

The program, funded by The Sunflower Foundation: Health Care for Konsons, is designed to improve the quality of life for seniors by improving mobility and functioning that helps them maintain their independent Bestyles.

the program will be available in 15 communities over a span of three years.

2006: Oberlin - Galeway Delt Center string with

Golden Age Carrier

Contact: Connie Grafts; (785) 475/29(1)

Rapella - Downtown 1960A

Contact: Sheyl Hungerford, (785) 354-8391

Great Bend - Central Largos Medical Center joining with Great Bend Recreation.

Commercion

Confact Unda Marqueling, (620) 783-3755

2007:

2006:

Concordia Gorden City Colforwood falls Higwalbar Dodge City Winfield

a Sites to be determined

The exercise regimen is offered at different levels to accommodate individual's specific needs. They focus on stretching, improving balance, coordination, and upper and lower extremities itrength.

- · Anyone over the age of 40 can participate
- · Levels for active older adults and levels legie enough for the until or nece froit
- · No equipment recoled.
- · Work at your own pace
- · Instructors are nothingly certified and horsed in times for senters
- . One hour classes offered three times of
- Classes begin Spring 200s

for more information contact: Your local community contact or Jenniller Springer of (785) 276-5448 Jenniller Springer Boging stole Java d sustainable environments.



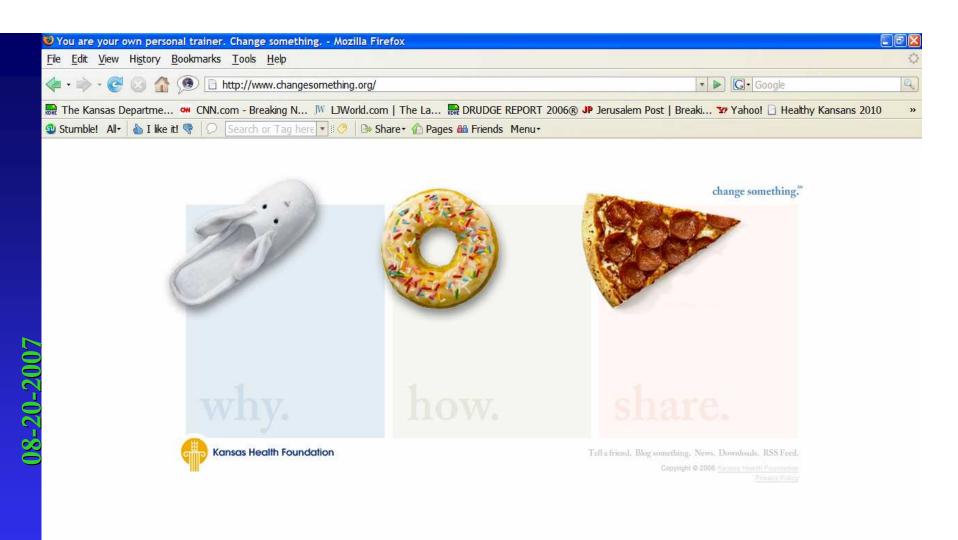
Healthy Kansas

- Media Campaign partner with KHF
 - · Change Something!
- Reactivate Governor's Council on Physical Fitness
- Governor's/Secretary's Awards
 - Fitness Awards (youth focus)
 - Local Community Health Heroes
 - Healthy Community Designations
 - Healthy School Designations
 - Model Workplace Wellness Sites









changesomething.org



"The major influence on our attitudes and behavior is not the media, but rather our contact with other people."

From, "Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing"



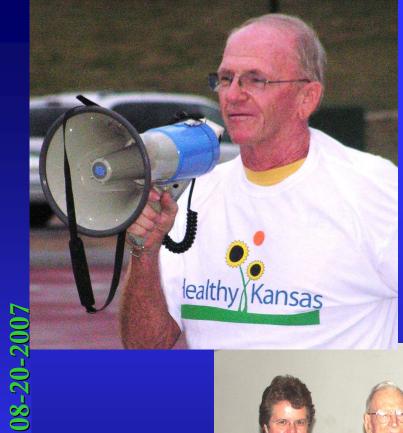


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Our Vision – He

environments.



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Since May 2006, HealthyKansas has awarded 12 Kansas school districts representing 91 individual school facilities with a HealthySchool flag in recognition of their commitment to creating a healthy learning environment for students.





Healthy Kansas

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Healthy Kansas - Pledge

- Increase activity level
- Eat healthy
- Stop smoking



YR 1: over 5,000 Kansans



Measures of Success

- Short-term - a process measure

Number of Kansans taking the pledge to

- 1.) reduce/eliminate their tobacco use
- 2.) increase daily consumption of 5 servings of fruits and vegetables, and
- 3.) increase the amount of daily physical activity to at least 30 minutes most days of the week.
- Intermediate markers BRFSS data
- Long term improved health status



Strategies - Diabetes

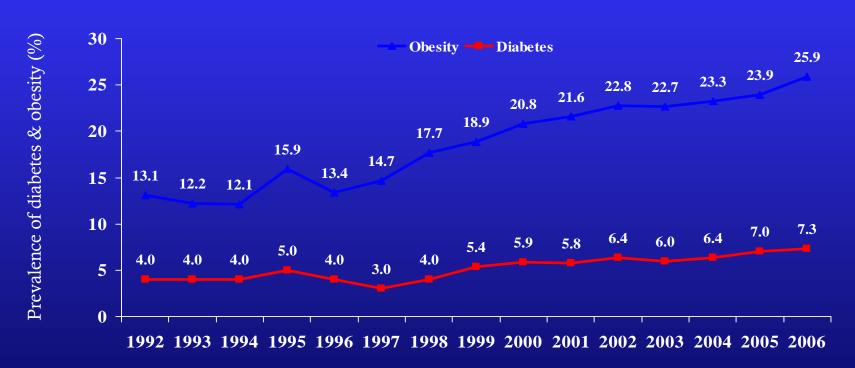
- 2006 7.3% or 147,000 adult Kansans diagnosed with diabetes
- One of the leading causes of blindness, end stage renal disease and lower extremity amputations
- Almost 50% of the Kansans are at increased risk for diabetes because of risk factors of age, obesity and sedentary lifestyle
- Children born in the year 2000 will face a 1 in 3 chance of developing diabetes at some time in their life
- 2004 direct and indirect cost of diabetes in Kansas was nearly \$ 1.4 billion

Strategies -

Prevalence and Trend of Diagnosed Diabetes and Obesity

Among Adult Kansans

(1992-2006)



Sources: (Diabetes)1992-2006 Behavioral Risk Factor Surveillance System, Office of Health Promotion, KDHE (Obesity): 1992-2006Behavioral Risk Factor Surveillance System, Center for Disease Control and Prevention Obesity Definition: Individuals with a Body Mass Index (BMI) of 30 or more are considered obese. (CDC). BMI = weight (kg)/height (m²)



Strategies - Diabetes

Average Yearly Health Care Cost United States 2002



Person With DiabetesPerson Without Diabetes

Source: Hogan P etal. Economic Cost of Diabetes in the U.S.in 2002. American Diabetes Association. Diabetes Care. 26: 917-932, 2003.



Costs Associated with Poorly Controlled Versus Well Controlled Diabetes

A1c Level	Adult with Diabetes	Adult with Diabetes, Hypertension & Heart Disease
6% (normal)	\$8,576	\$38,726
7% (goal)	\$8,954	\$40,230
8%	\$9,555	\$42,467
9%	\$10,424	\$45,557
10%	\$11,629	\$49,673

Source: Gilmer, Todd P, et al. Diabetes Care 1997; Vol. 20, No. 12. Average Medical Care Over 3 Year Period



Kansas Diabetes Prevention & Control Program Objectives

By 2008, increase the rate of:		
HbA1c test	69.1 % to 83.0 %	
Annual foot exam	60.8% to 83.0%	
Dilated eye exam	67.5% to 83.0%	
Recommended annual pneumococcal immunization	49.3% to 51.6%	
Recommended annual influenza immunization	60.7% to 63.5%	



Project Demographics

- 66 Funded Organizations (2004-2007)
- 45 Funded Organizations (Currently)
- 80 Sites Statewide
- 350+ Participating Health Professionals
- Diverse Organizations



Project Organization Demographics - continued

Types of participating organizations:

- Local Health Departments
- Community Health Clinics
- Safety Net Clinics
- American Indian Health Clinic
- Home Health Agencies
- Hospital Affiliated Practices
- Private Practices
- Farmworker Program
- Promotora Program





Project Components

First Year----Process

- Chronic Care Model Training
- Chronic Disease Electronic Management System (CDEMS) Training
- ■Data Entry and Analysis
- Quarterly Reports
- Office Protocol Development Encouraged
- Diabetes Teams Encouraged
- Regular Team Meetings Encouraged
- Monthly Conference Calls
- Site Visits



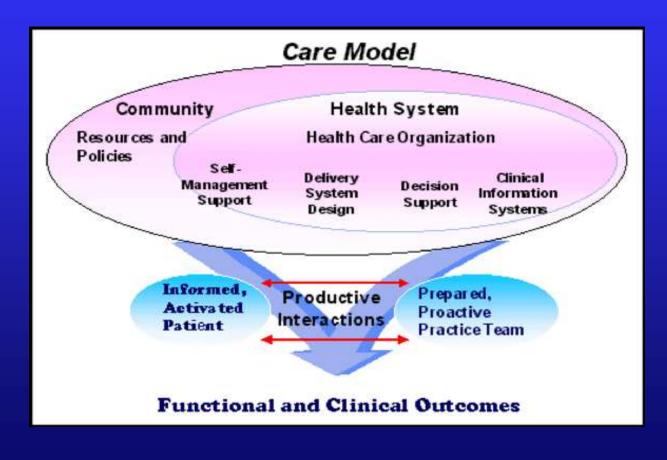
Project Components

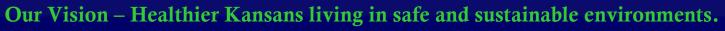
Second Year----Outcomes

- Advanced CDEMS Training
- Advanced Data Analysis
- Diabetes Teams Established
- Regular Team Meetings Documented
- Office Protocols Implemented
- Monthly Conference Calls
- ■Improved Quality of Care Measures



The Chronic Care Model







The Chronic Care Model

Environment

Family

School

Worksite

Community

Patient Self-Management **Medical System**

Information Systems

Decision Support

Delivery System Design

Self Management Support



Chronic Care Model Components

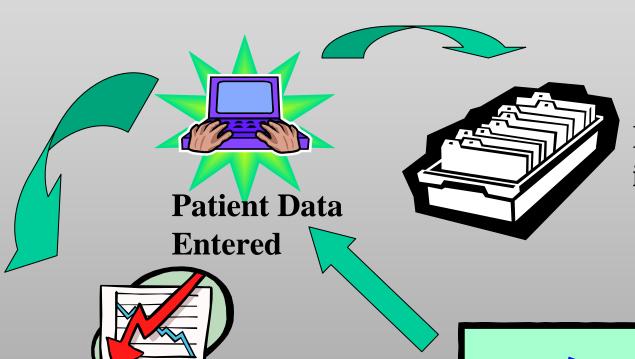
- Health Care Organization
- Delivery System Design
- Decision Support
- Self-Management Support
- Community Resources
- Clinical Information System



CDEMS



How does it work?



Hard copy inserted into patient's chart

% of Patients Receiving Vaccinations and Foot Exams
Needs Improvement



Dr. updates patient's chart

First Year Outcomes

Health Care Organization			
Outcomes	1st quarter	4 th quarter	% change
Quantifiable goals for quality of care provided to Patients	45%	66%	46%
Holding routine diabetes team meetings	42%	60%	42%

Organizations Checking Yes on the Quarterly Office Self-Assessment Form



First Year Outcomes Cont'd....

Delivery System Design			
Outcomes	1st quarter	4 th quarter	% change
Routinely ask patients to remove socks and shoes before exam	39%	69%	76%
Non-physician staff allowed to do foot exam	36%	39%	8%
All patients scheduled for follow-up	60%	60%	-
Non-physician staff empowered to order overdue labs	36%	54%	50%
Non-physician staff empowered to administer flu and pneumonia vaccinations	48%	57%	18%

Organizations Checking Yes on the Quarterly Office Self-Assessment Form



First Year Outcomes Cont'd....

Decision Support			
Outcomes	1st quarter	4 th quarter	% change
CDEMS used to make decisions about needed care for patients	36%	54%	50%
Self-management Support			
Outcomes	1st quarter	4 th quarter	% change
Patients routinely know their targets for blood pressure, finger stick blood sugar, and HbA1	18%	54%	200%
Provide resources for patients to allow them to be full partners in their care	42%	69%	64%

Organizations Checking Yes on the Quarterly Office Self-Assessment Form

Our Vision – Healthier Kansans living in safe and sustainable environments.

First Year Outcomes Cont'd....

Community Resources			
Outcomes	1st quarter	4 th quarter	% change
Develop partnerships in the community for referral	39%	51%	30%
Clinical Information Systems			
Outcomes	1st quarter	4 th quarter	% change
Use CDEMS to record patients with eye exams, foot exams, HbA1c, flu and pneumonia vaccinations	45%	75%	66%
Use CDEMS as a reminder system to prompt when a patient is due for labs or visit	27%	42%	55%

Organizations Checking Yes on the Quarterly Office Self-Assessment Form

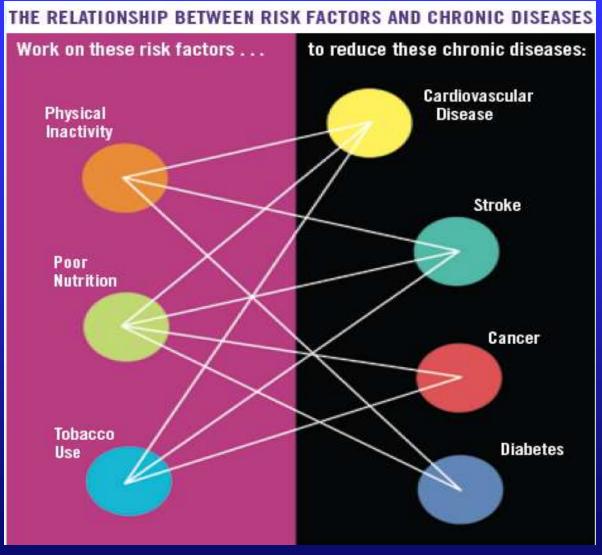
Our Vision – Healthier Kansans living in safe and sustainable environments.

Project Direction

- Continue to add organizations
- Provide technical assistance to practices to further improvements in diabetes indicators
- Collaborate with other chronic disease programs (Hypertension quality of care project)
- Explore collecting primary prevention data
- Explore interfacing CDEMS with EHR



Strategy





Proposals: Tobacco Control

- Statewide ban on smoking in public places.
- Counseling services for tobacco cessation.
- State agency meeting policy
- Health impact fee.



Proposals: Physical Activity

- Strengthen the physical education and physical activity requirements for all elementary and middle schools in Kansas.
- Comprehensive coordinated school health program.



Proposal: Nutrition

Competitive food restriction in schools.



Proposals: Obesity

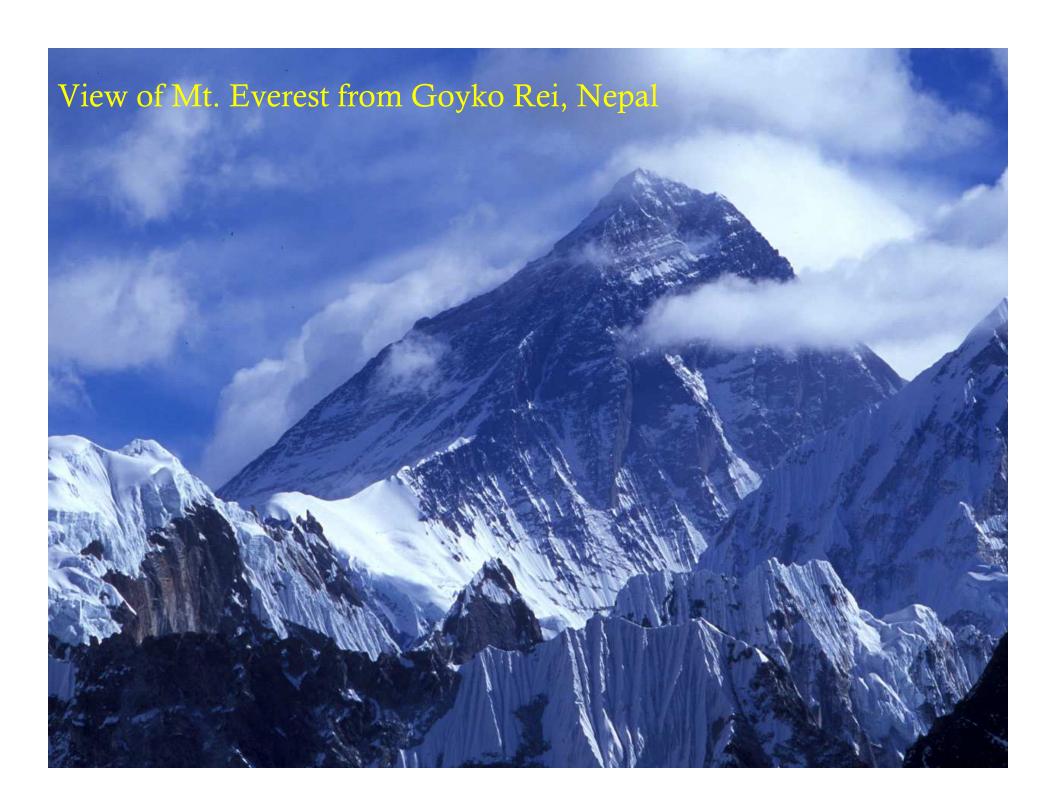
- Meeting policies.
- Surveillance of body weight among Kansas children.



Proposals: Additional Prevention Initiatives

- Enhanced cancer screening breast, cervical, prostate, and colorectal.
- Incentives for comprehensive workplace wellness programs.
- Community health improvement programs (grants to local health departments).





"We shall go to the moon, and do the other things, not because it's easy, but because it's hard. We sail on this new sea because there is new knowledge to be gained and new rights to be won, and they must be won and used for the progress of all people."

President John F. Kennedy "This New Ocean" - 9/62



"No one will thank you for taking care of the present if you have neglected the future."

Joel Barker Futurist





www.healthykansas.org

